



名古屋大学 博士課程教育リーディングプログラム

フロンティア宇宙開拓リーダー養成プログラム

Leadership Development Program for Space Exploration and Research

LGSフロンティア宇宙 ニュースレター

LGS FRONTIER NEWSLETTER

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International Student Special

ご挨拶



Program Deputy Coordinator:
Graduate School of Science
Toru IIJIMA

“**M**onozukuri”, a Japanese word meaning manufacturing or technology development, represents one of the most distinguishing characteristics of the culture in Nagoya University. Needless to say, it is an essential part of the research in the Graduate School of Engineering, and many cutting-edge aerospace technologies are developed there. Also, unique technologies to detect and image many types of radiation and particles have been developed by researchers in the Graduate School of Science and Institutes for Space-Earth Environment Research. The Chubu area, where Nagoya University is located, has developed as an industrial area, and has many of the leading industries in the country. The area is especially a center of aerospace industries, which require integration of many types of technologies. The Monozukuri culture at Nagoya University has been developed in such an environment.



Monozukuri is also one of the important ingredients in the Leadership Development Program for Space Exploration and Research, which aims to develop future personnel taking leadership in space-related industries and research organizations. Without the development of advanced and

reliable technologies, no aerospace missions would be successful. Our program aims to provide students with a broad knowledge about technology related to space development and also many hands-on training experiences. The ChubuSat instrument development program is an opportunity for students to gain such experience. The program also offers many Monozukuri programs, such as Monozukuri lectures, laboratory courses, tours and repository, to provide students with opportunities to gain knowledge, skills and experience in manufacturing and technology development. For example, in Monozukuri laboratory courses, we offer variety of practical training for basic and advanced machining, as well as for electronic circuit development.



We believe that Monozukuri is the driving force to develop the country. We hope that students inherit the Monozukuri spirit in the tradition of Nagoya University, and become future personnel who can take leadership in space-related industries and research organizations.

留學生活動報告

Our program has many international students. In fact, about 20% of the students come from abroad. Their home countries are Benin, China, India, Korea, Peru, Thai and Vietnam. In this Newsletter, we focus on these students.

Graduate School of Engineering

M1

Jacinto Enrique COLAN ZAITA



Leadership and Cross Culture

Leadership is a powerful word, and usually conjures up images of people we consider great leaders from the pages of history: politicians, military figures or businessmen. All of them share a history of successes and failures. Nowadays, the new concept of leader has become important for any enterprise to succeed, and is fundamental to our academic careers in order to transcend our fields and contribute to the development of new technologies. This is the main reason I decided to apply to this program. This leading program has an ambitious goal, to train future leaders to be able to lead the scientific progress through organizations and societies that allow us, not only in Japan but all over the world, to change paradigms and challenge our capacities.

I'm from Peru and I have been living in Japan for almost 2 years. The differences are huge between both countries. Technology, safety and order are only a few examples, but maybe the most outstanding. In Peru, I worked for several years dealing with people in manufacturing companies, and I realized that its major problems are not technical but human. Learning how to deal with real problems and people in interdisciplinary teams, time

management and technology development are the biggest needs in our new generation of professionals. This program focuses on this. We received several leading seminars in which different topics and areas are presented, giving us a broad perspective about leadership, space technology and even societal issues. Communication training has also been very useful to improve my communication skills and at the same time learn different perspectives and share experiences with Japanese and international students. Having the opportunity to be part of this leading program has taught me a lot, I have met people from different cultures and backgrounds, I have been improving my English skills and soft skills, I have learned more about space technology and have socialized with professionals in the field. I am completely confident that I will still have a lot of experiences to share and I aim to make the most of this opportunity in order to become a leader useful for our society.



On top of Mount Fuji

Jacinto Enrique COLAN ZAITA

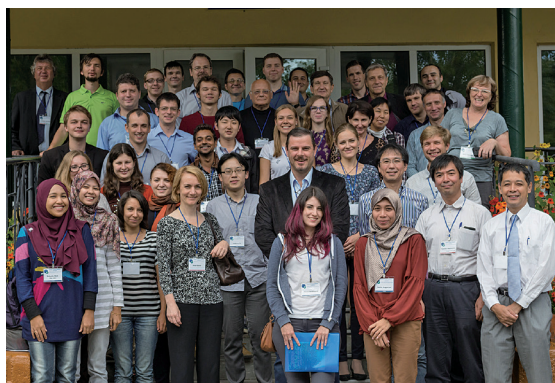
Graduate School of Engineering
M2

Heqiucen XU
(徐 何秋岑)



Study Overseas, a Unique Experience

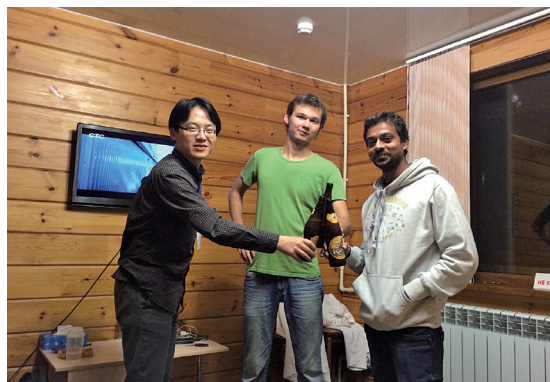
The COSPAR 2016 Capacity Building Workshop was held in Kamchatka, Russia this summer, and the title of this workshop was 'Impact of Space Weather on Earth'. Students from various countries participated in this wonderful workshop. Funded by the LGS Frontier Space Program of Nagoya University, I stayed there for more than half a month and participated in the whole workshop.



The COSPAR 2016 Workshop

Nearly 30 students were in this workshop. In the morning, we attended academic lectures given by professors and teachers from different research fields. The afternoon was given to students to run their group projects. Our group picked up a severe geomagnetic storm event and showed our analysis and explanation of this event at the student presentation session on the last day. We learned many unique and interesting concepts about space weather, from solar activity to phenomena that happens on the ground. The Russian students' happy attitude towards studying and strong

passion to discover new knowledge were very impressive. My supervisor also took me to see our laboratory's observational instruments located at the local institute. I had a good chance to learn the practical operations of the all-sky camera and the magnetometer. Local maintenance staff and engineers accompanied us and explained to us many details about their operations in recent years.



Discussion with Russian students

In addition, our international students had many chances to talk with Russian students. We drank beer together at night, shared different stories about our home countries with each other, and enjoyed a two-day hiking trip. We experienced a Russian Karaoke party, hot spring, and unique way of cooking salmon. The perfect local seashore with black sand was especially beautiful. This Russian trip was a very wonderful experience for me.



Lab experiment setting in Canada

Heqiucen XU (徐 何秋岑)

Graduate School of Engineering
D1

Ranjit Rohidas BORUDE



ChubuSat, India and I

The aim of the ChubuSat satellite program developed by Nagoya University to expand space utilization with minimal costs and optimum results is such a unique endeavor. Being associated with the ChubuSat satellite program during the past six months has been a life-changing experience for me. I am getting the opportunity to study in a professional, challenging and ambitious environment as well as to interact with different cultures, people and world community. Most importantly, it has helped me discover my real inner potential. While working with this project (ChubuSat Phase 1), my horizons have expanded and it seems that now I am living in the most useful and productive period of my life.

By attending the meticulously-structured courses and workshops, I have learned many new and exciting things about satellite development, which have enabled me to confidently pour my own ideas and past research experience and to collaborate with other senior members. Not only the satellite program but also the Monozukuri lectures and laboratory courses form a perfect platform to develop my skills required in the future. The Leadership Development Seminar (LDS) is a marvelous opportunity for me to interact and learn from highly-designated leaders of industries and eminent successful scientists. The LDS keeps me updated and the issues covered in these seminars sharpen my leadership skills and I recommend everyone to be part of this.

Coming from a country like India, where culture

and traditions are highly diverse, to another country, Japan (Nihon 日本), was a very smooth transition for me. The people here have a great sense of nationality and social well-being. Japanese people are very skillful and show tremendous dedication to their work. Living in Nagoya is a great experience. People are humble and I have made many friends. Technology and utilization of time are unique aspects that I have experienced in Japan. In the future, I see myself as a successful contributor in the realm of science and doing something important for mankind. Nagoya University and the city have offered me so much that I have not only found my academic interests but also re-established my connection to many important things in my life. Pursuing doctoral studies at Nagoya University and joining the LGS Frontier Space Program are definitely two of the best decisions that I have made in my life.

Ranjit Rohidas BORUDE

Graduate School of Engineering
M1

Jiaju MA
(馬 家駒)



Lead the Way with LGS

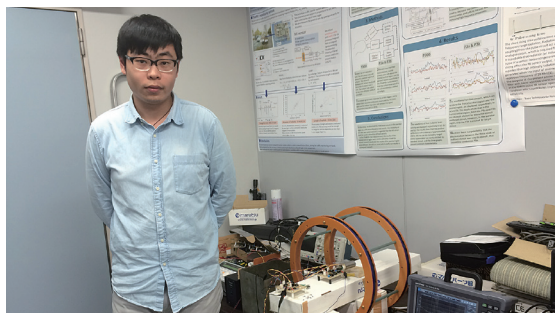
I have been a member of the LGS for half a year. It is my honor to have such an opportunity to participate in the LGS. The LGS is not only the center of science development and cultural exchange, but also a warm harbor for LGS students. It has provided a lot of opportunities for us to learn about various cultures and to decode the surprising ideologies, and learn a lot of advanced knowledge about space development. Although these are sometimes a bit outside my specialty, they stimulate me and expand my knowledge.

Meanwhile, the professors and assistants are very kind to the students and give us many useful suggestions and feedbacks.

In the LGS, I am interested in the ChubuSat program. I would like to bring my research to reality and combine application with research. I am captivated by the charm of space and I enjoy challenges. Through the LGS Frontier Space Program, I intend to donate my technical capability on real work and promote problem-solving skills with team work.

My research is the development and application of a high-sensitivity micro MI sensor. As far as I am concerned, it can be used for developing space research. For example, the sensor can be equipped on a space craft or tools for real-time monitoring of the electromagnetic environment in space and to monitor the status of the craft or tools to ensure safety. It also can be equipped on a spacesuit to monitor the astronaut's physiological or mental status.

When I graduate from this program with a doctoral degree, I would like to concentrate on my post-doctoral research at a university or an institute in Japan. Then I will focus on integrating my research and space development with the advanced research capability, the methodologies and qualities that I have learned from this program. When I get enough experience, I want to hand down what I have learned to the younger generation and make some achievement in the academic field.



At my laboratory

Jiaju MA (馬家駒)

Graduate School of Engineering
M2

Tong TONG
(童彤)



Life as an International Student in Japan

Studying in Japan for Chinese students has some advantages, such as a similar culture, similar eating habits and similar weather. However, there are still some aspects which need be taken into consideration.

If you really want to communicate with Japanese people, integrate into Japanese society, and enjoy the Japanese culture. Other than just obtaining a diploma and heading back to your motherland, you should reach out to your fellow students and make friends with Japanese or international students from other countries. As a member in the LGS Frontier Space Program, I feel so lucky, since this program provides us with so many opportunities to communicate among people of different studies and different cultures, in the Leadership Development Seminar, at monthly coffee chat and some special activities like the retreat, the new year gathering and so on.

In the Leadership Development Seminar, we can hear the experiences shared by the professors, managers, and people from all walks of life, which open our mind and enrich our thoughts inside. Sometimes, we can obtain the experience shared by others' leadership which is useful for our future research in making research plans. In the social science & culture seminar, we can gain a deeper understanding of Japanese culture, like Manga superheroes, as well as international social common sense. In addition, in the Monozukuri seminar,

we developed our machining ability.

The coffee chat is a free time for us students and professors to discuss the studies as well as insights on life. Since it is free form, you will feel so comfortable during the communication and be inspired imperceptibly.

In the LGS Frontier Space Program, I not only have opportunities to study scientific knowledge, but also to engage in various activities to enrich my life.

Tong TONG (童彤)

Graduate School of Engineering
M2

Dogyun HWANGBO

Two Years of Lessons About Leadership

Two years have passed since I re-joined the Leading Graduate Program. In the meantime, I have been doing various things in the curriculum and interacting with a lot of people I would not have encountered if I had not been in the LGS. Through the Chubusat-phase1, Student committee, and Christmas lecture, I also enjoyed the joy of accomplishment while working with many good mates. At this point of inflection where my past time and future time in the program are similar, I thought about what I should develop further to become a leader I imagine.

The first is the importance of participation. I decided to participate in the Christmas lecture while I was busy with the Chubusat project. At first, it was so tough because it was too much work. However, as I participated in the Christmas lecture,

I was able to learn the role of the project manager and its importance, and realized the efficiency of the organization where teamwork is effective and flexible. So after the Christmas lecture was successful, I was very satisfied with the decision to participate.

The second is friendship. Although the LGS annual schedule has various gatherings, I think whether it is effective or not depends on how aggressively we communicate with others in the gatherings.

Once making a friend in a meeting, it is important to make sure that the relationship continues after the meeting. The widening of human relationships can be the driving force of development and innovation in research and business. Looking back over the last two years, I regret that I have been poorly engaged and that I have not been able to communicate positively with my colleagues through many opportunities. I would like to try to be more active about these two for the next two years.



Collaborative staff at Christmas Lecture at Nagoya site

Dogyun HWANGBO

新任教員紹介

New Staff

Graduate School of Engineering

Esin CAKIR

Hello everyone. I'm from Istanbul, Turkey. I have been at Nagoya University since July 2016. I was a research and teaching assistant in the Material Science and Manufacturing Engineering Division in the Mechanical Engineering Department at the Istanbul Technical University where I received my Master and Doctoral degrees. My research area is analytical modeling in machining. Now, I am a researcher at the Shamoto Laboratory and one of the mentors of the ChubuSat Program.

I am an amateur bird watcher and it is exciting to explore local birds of Nagoya. You can see me on campus following birds in order to take photos of them. I am also interested in fountain pens and inks - not as a collector but because I prefer to use them than to store them. Recently, I have started to learn Japanese and learning Japanese is really difficult for me. I hope I will succeed.



I'm glad to be a member of this program.
よろしくお願いします。

編集後記 Editor's note

We have many international students in our program. We asked them to contribute Newsletter articles. This is our first attempt to write a Newsletter completely in English. How is it? (KH)

名古屋大学大学院理学研究科

フロンティア宇宙事務室内Newsletter 編集チーム

住 所 : 〒464-8602 名古屋市千種区不老町
名古屋大学理学部・理学研究科 C315

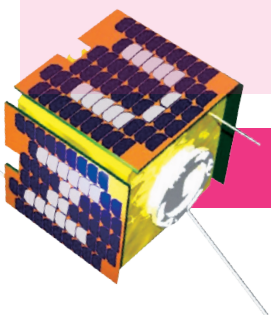
電 話 : 052-789-2930 F A X : 052-789-2931

Email : [プログラム全般に関するお問い合わせ]

office@frontier.phys.nagoya-u.ac.jp

[Newsletterに関するお問い合わせ]

NL@frontier.phys.nagoya-u.ac.jp



<http://www.frontier.phys.nagoya-u.ac.jp>